



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,570	07/21/2003	Michiyuki Sugino	1152-0301P	4824
2292	7590	11/28/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			MOON, SEOKYUN	
			ART UNIT	PAPER NUMBER
			2675	

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,570	SUGINO, MICHYUKI	
	Examiner	Art Unit	
	Seokyun Moon	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/21/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☒ Claim(s) 2 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1 and 3** are rejected under 35 U.S.C. 102(e) as being anticipated by Kubota et al. (U.S. Pub. No. 2001/0024181 A1, herein after referred to as "Kubota").

As to **Claim 1**, Kubota teaches a liquid crystal display including a table memory (*graph base table 26*) for storing compensation signal data (*brightness level to be output*) for compensating the input signals for the optical response characteristics of an LCD panel, in accordance with gray scale transitions from the previous to current vertical display periods, and a gray scale determining means (*LCD controller LSI 34*) for determining a write gray scale signal (*appropriate signal*) to the LCD panel based on the compensation signal data (*signals received from the I/F board 20*), [Kubota: fig. 1, par. [0049] lines 12-18 and par. [0050] lines 3-9]

characterized in that the table stored in the table memory (*graph base table 26*) stores each compensation signal data value (*brightness level to be output*) corresponding to the combination of a representative gray scale level of the image

Art Unit: 2675

signal in the current vertical display period (*next brightness*) and that of the image signal in the previous vertical display period (*previous brightness*). [Kubota: fig. 1, par. [0049] lines 12-18 and par. [0050] lines 3-9]

Furthermore, Kubota teaches the representative gray scale levels for each are set at varying intervals, close and dispersed intervals, depending on the optical response characteristics of the LCD panel since the representative gray scale level of the image signal in each vertical display period varies from a vertical display period to next vertical display period and thus, the interval, the difference between the representative gray scale levels of the image signals in vertical display periods, varies.

As to **Claim 3**, Kubota teaches that the gray scale determining means (*LCD controller LSI 34*) determines compensation signal (*appropriate signal*) data values corresponding to the combinations of gray scale levels between representative gray scale levels, by calculation based on the compensation signal data (*brightness level to be output*) stored in the table (*graph base table 26*) in correspondence with the combinations of representative gray scale levels. [Kubota: fig. 1, par. [0049] lines 12-18 and par. [0050] lines 3-9]

Allowable Subject Matter

3. **Claims 2 and 4** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior arts teaches the representative gray scale levels being set at close or dispersed intervals depending on whether the optical response speed of the LCD panel is heterogeneous or not, in a liquid crystal display including a table memory for storing compensation signal data for the optical response characteristics of an LCD panel, gray scale determining means for determining a write gray scale signal to the LCD panel based on the compensation data, and the representative gray scale levels for each are set at varying intervals depending on the optical response characteristics of the LCD panel.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Ito (U.S. Pub. No. 2003/0006951 A1) discloses a liquid crystal display device with a display data processing circuit with reduced memory capacity.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2675

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

2005/10/31

SM

A handwritten signature in black ink, appearing to read "Sumati Lefkowitz", with a stylized, flowing script.

SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER